CLAIMS

Amend the claims as follows.

1.   (Currently amended) A system comprising:

a computer communicatively coupled to a network device over a network, the computer operable to:

display a document including editable text corresponding to a local copy of a configuration file for the network device, the editable text representing a plurality of different objects that each control different functionality of the network device;

receive a user input modifying a selected portion of the text that corresponds to one of the objects;

send a first code component to said network device;

receive a second code component from said network device in response to said sending said first code component;

initiate an automatic completion of a user inputted command, wherein said first code component comprises a textual fragment of said user inputted command, wherein said second code component comprises the completed command in its entirety, and wherein said completed command in its entirety is added to said text;

wherein the document is retrieved from the network device in response to a user request or written by a user; and

exchange communications with the network device ~~immediately and~~ prior to receiving a subsequent ~~second~~ user input that modifies a different portion of the text that corresponds to a different one of the objects, the communications for:

dynamically modifying a remote copy of the configuration file that is stored on the network device without exchanging an entire copy of the configuration file between the computer and the network device; and

generating incremental configuration changes in a network device.

2.   (Previously presented) The system of claim 1 wherein the network device is reconfigured dynamically and interactively while the user modifies the text displayed by the computer.

3.   (Canceled)

4.   (Currently amended) The system of claim [[3]] 1 further comprising:

the network device to send the completed command to the computer for synchronizing changes to the local copy of the configuration file with changes to the remote copy of the configuration file; and

the computer to receive the completed command and update the displayed document based on the completed command.

5.   (Previously Presented) The system of claim 4 wherein the document displays the textual fragment when the network device initiates reconfiguration based on the complete command.

6.   (Previously presented) The system of claim 1 wherein the network device is configured to perform syntax checking on edited lines transferred from the computer responsive to the communication exchange.

7.   (Previously presented) The system of claim 1 wherein the computer is operable to use a Command Line Interface (CLI) parser installed on the network device to process the user request.

8.   (Previously presented) The system of claim 7 wherein the computer does not emulate a replication of the Command Line Interface (CLI) parser of the network device.

9.   (Previously presented) The system of claim 8 wherein the computer leverages the command correction capability of the network device so that changes to a command-set used for

command correction on the network device does not require an update to a command-set on the computer.

10. (Previously presented) The system of claim 1 wherein the computer is further operable to send the selected portion of the text to the network device without sending different unchanged portions of the text.

11. (Previously presented) The system of claim 1 further comprising:

the computer to form a transport object;

the computer to generate code indicating the modifications to the selected portion of the text; and

the computer to dispose said transport object containing the code within a transport medium.

12. (Previously presented) The system of Claim 11 wherein said code comprises a command configured to instruct the network device to make corresponding modifications to the remote copy of the configuration file.

13. (Previously presented) The system of Claim 12 wherein said command is rendered in Command Line Interface format.

14. (Previously presented) The system of Claim 11 wherein said transport medium comprises an interface and wherein said interface substantially complies with Common Object Request Broker Architecture.

15. (Previously presented) The system of Claim 14 wherein the computer is configured to form said transport object by embedding said code within a set of tags and wherein said tags comprise Extensible Markup Language markers.

16. (Previously presented) The system of Claim 11 wherein said transport medium comprises a serial line interface.

17.   (Previously presented) The system of Claim 11 wherein said transport medium comprises Telnet.

18.   (Previously presented) The system of Claim 11 wherein said transport medium comprises Secure Shell.

19-23. (Cancelled)

24.   (Previously Presented) A computer based system for interactively configuring a network device, comprising:

an application for providing a development environment;

a text editing tool co-functional with said development environment application, for editing a document wherein said document comprises a configuration for said network device and wherein said configuration is retrieved from said network device in response to a user request;

a user interface co-functional with said development environment application, for displaying said document and allowing said user to make a change to said document;

a code generator co-functional with said user interface, for generating code corresponding to said change; and

a communication module co-functional with said code generator, for sending said change to said device wherein said change is made to said document by a process comprising:

sending a first code component from said communication module to said network device;

receiving a second code component from said network device at said communication module in response to said first code component; and

wherein said user request comprises at least one request selected from the group comprising:

initiating an automatic completion of a command entered by said user into said document, wherein said first code component comprises a textual fragment of said

command, wherein said second code component comprises said command in its entirety, and wherein said command in its entirety is added to said text;

requesting a list of commands that are appropriate to a position in said text, wherein said first code component requests said list, wherein said second code component comprises said list, wherein said list is displayed to said user, and wherein said user may select a command from said list for insertion into said text at said position; and

initiating a syntax check, wherein said first code component comprises said request for said syntax check, wherein said second code component comprises a detection of an error in said document, and wherein said document is updated to display said error.

25. (Previously Presented) The computer based system as recited in Claim 24 wherein said change in said configuration is sent without sending an unchanged component of said configuration to said network device and wherein said sending said change to said network device comprises:

forming a transport object wherein said transport object contains code comprising said change; and

disposing said transport object within a transport medium wherein said transport medium comprises a medium selected from the group comprising:

an interface and wherein said interface substantially complies with Common Object Request Broker Architecture;

a serial line interface;

Telnet; and

Secure Shell.

26. (Previously Presented) The computer based system as recited in Claim 25 further comprising;

a highlighting module for selecting a part of said document to implement said change, and for indicating which parts of said document have been modified; and

an undo manager for restoring said configuration to a state prior to implementing said change.

27.   (Currently Amended) A method comprising:

displaying a document including text corresponding to a configuration file stored on a remotely located network device, the text representing multiple different objects that each control different operational characteristics of the remotely located network device;

receiving a user input modifying a selected portion of the text that corresponds to a first subset of the objects;

sending one or more communications over a network to the network device ~~immediately and~~ prior to receiving a subsequent ~~second~~ user input that modifies a different portion of the text that corresponds to a second different subset of the objects, the communications configured to cause the network device to dynamically modify the configuration file that is stored on the network device;

sending a first code component to said network device;

receiving a second code component from said network device in response to said sending said first code component;

initiating an automatic completion of a user inputted command, wherein said first code component comprises a textual fragment of said user inputted command, wherein said second code component comprises said command in its entirety, and wherein said command in its entirety is added to said text; and

after performing command completion responsive to receiving the second code component, updating a display of the textual fragment with the command in its entirety to synchronize the display with the configuration file located on the network device.

28.   (Previously presented) The method of claim 27 wherein the communications include payload data configured to control only a subset of the operational characteristics that corresponds to the first subset of the objects such that the method does not require transferring an entire copy of the configuration file to or from the network device to elicit the dynamic modification of the configuration file.

29.   (Cancelled)

30.   (Previously presented) The method of claim 27 further comprising:

forming a transport object for sending the communications, wherein said transport object contains code configured to control dynamic modification of the configuration file; and

disposing said transport object within a transport medium.

31.   (Previously presented) The method of claim 30 wherein said code comprises a command and wherein said command is rendered in Command Line Interface format.

32.   (Currently amended) The method of claim 30 wherein said transport medium comprises a medium selected from the group consisting essentially of:

an interface wherein said interface substantially complies with Common Object Request Broker Architecture;

a serial line interface;

Telnet; and

Secure Shell.

33.   (Previously Presented) A computer based system, comprising:

means for displaying a document including text to a local user upon receiving a configuration of a remote network device, wherein said document comprises the configuration for said network device in a text format and wherein said computer is coupled to said network device;

means for allowing said user to modify said text comprising said document;

means for interacting with the remote network device to provide the modified text to the remote network device, wherein said interacting means comprises;

means for sending a first code component comprising at least a portion of the modified text to said network device;

means for receiving a second code component from said network device in response to said sending said first code component;

means for initiating an automatic completion of a user inputted command, wherein said first code component comprises a textual fragment of said user inputted command,

wherein said second code component comprises said command in its entirety, and wherein said command in its entirety is added to said text; and

means for updating a display of the textual fragment with the command in its entirety to synchronize the display with the configuration file located on the network device after performing command completion responsive to receiving the second code component.

34. (Previously Presented) The computer based system as recited in Claim 33 wherein said modified text includes a syntax error and wherein the second code component comprises the portion of the modified text with the syntax error corrected.

35. (Cancelled)

36. (Previously presented) The computer based system as recited in Claim 34 further comprising:

means for forming a transport object wherein said transport object contains the first code component; and

means for disposing said transport object within a transport medium.

37. (Currently amended) The computer based system as recited in Claim 36 wherein the computer is configured to interact with the remote network device to provide the changed text independently of whether the computer detects that the changed text comprises an incomplete command and wherein said transport medium comprises a medium selected from the group consisting essentially of:

an interface and wherein said interface substantially complies with Common Object Request Broker Architecture;

a serial line interface;

Telnet; and

Secure Shell.

38-46. (Cancelled)

47.   (Previously presented) The system of claim 1 wherein the computer is configured to communicate directly with the network device such that said direct communications are not affected by or exchanged via an intermediary data processing module that generates configuration data in the form of a list or directory and restricts configuration modification to user selections from said list or directory.

48.   (Currently amended) <u>A system comprising:</u>

<u>a computer communicatively coupled to a network device over a network, the computer</u> operable to:

<u>display a document including editable text corresponding to a local copy of a</u> <u>configuration file for the network device, the editable text representing a plurality of different</u> <u>objects that each control different functionality of the network device;</u>

<u>receive a user input modifying a selected portion of the text that corresponds to one of the</u> <u>objects</u> ~~The system of claim 1~~ wherein the user input represents a textual fragment to be automatically completed by the computer<u>;</u> ~~, and the computer is further operable to:~~

send a first code component to the network device, the first code component representing the textual fragment;

receive back a second code component, the second code component comprising a complete command that corresponds to the textual fragment; ~~and~~

<u>exchange communications with the network device prior to receiving a subsequent user</u> <u>input that modifies a different portion of the text that corresponds to a different one of the</u> <u>objects, the communications for:</u>

<u>dynamically modifying a remote copy of the configuration file that is stored on</u> <u>the network device without exchanging an entire copy of the configuration file between the</u> <u>computer and the network device; and</u>

<u>generating incremental configuration changes in a network device; and</u> updating the displayed document to include the complete command.

49.   (Currently amended) <u>A system comprising:</u>

<u>a computer communicatively coupled to a network device over a network, the computer</u> operable to:

display a document including editable text corresponding to a local copy of a configuration file for the network device, the editable text representing a plurality of different objects that each control different functionality of the network device;

receive a user input modifying a selected portion of the text that corresponds to one of the objects, ~~The system of claim 1~~ wherein the user input selects a position within the editable text; ~~and the computer is further operable to:~~

exchange communications with the network device prior to receiving a subsequent user input that modifies a different portion of the text that corresponds to a different one of the objects, the communications for:

dynamically modifying a remote copy of the configuration file that is stored on the network device without exchanging an entire copy of the configuration file between the computer and the network device; and

generating incremental configuration changes in a network device;

send a first code component requesting a list of commands that are appropriate to the user selected position within the editable text;

receive back a second code component representing said list of commands;

· display the list of commands for user selection; and

responsive to receiving a user selection from the list, insert ~~inserting~~ a corresponding one of the commands from the list into said text at said position.

50.   (Currently amended) A system comprising:

a computer communicatively coupled to a network device over a network, the computer operable to:

display a document including editable text corresponding to a local copy of a configuration file for the network device, the editable text representing a plurality of different objects that each control different functionality of the network device;

receive a user input modifying a selected portion of the text that corresponds to one of the objects;

exchange communications with the network device prior to receiving a subsequent user input that modifies a different portion of the text that corresponds to a different one of the objects, the communications for:

dynamically modifying a remote copy of the configuration file that is stored on the network device without exchanging an entire copy of the configuration file between the computer and the network device; and

generating incremental configuration changes in a network device;

~~The system of claim 1 wherein the computer is further operable to:~~

send a first code component to the network device responsive to the user modifying the text, the first code component requesting a syntax check by the network device on the modified text; and

receive back a second code component indicating a syntax error in the modified text; and display the syntax error.

51.   (Currently amended) An apparatus comprising:

one or more processors; and

a memory coupled to the processors comprising instructions executable by the processors, the processors operable when executing the instructions to:

display an editable document representing a local copy of a configuration file stored on a remote network device, the editable document representing a plurality of different objects that each control different functionality of the network device;

detect an input modifying the editable document;

responsive to detecting the input, send a first code component representing a command fragment over a network and to the remote device;

receive back a second code component over the network and from said network device, the second code component including a command corresponding to the command fragment; and

update a display of the command fragment with the command in its entirety to synchronize the displayed editable document with the reconfigured configuration file located on the network device; and

exchange communications with the network device prior to receiving a subsequent input modifying a different portion of the text that corresponds to a different one of the objects, the communications for:

dynamically modifying a remote copy of the configuration file that is stored on the network device without exchanging an entire copy of the configuration file between the computer and the network device; and

generating incremental configuration changes in a network device.

52.   (Previously Presented) The apparatus of claim 51,

wherein the second code component includes an indication that the configuration file stored on the remote network device has been modified according to the corresponding command; and

wherein said modification of the configuration file stored on the remote network device occurs before the second code component is received and before the editable document is updated with the command in its entirety.

53.   (Currently amended) The apparatus of claim 51 wherein the processors are further operable when executing the instructions to editable document includes text initiate an automatic completion of an input modifying the editable text, wherein said first code component comprises a textual fragment of a predetermined textual modification and the second code component comprises the textual modification in its entirety, and wherein the textual modification is added to the text.

54.   (Previously Presented) The apparatus of claim 51 wherein the processors are further operable when executing the instructions to:

modify the configuration file stored on the remote device incrementally by repeating iterations of:

detecting an input modifying the editable document;

responsive to detecting the input, sending a nth code component to the remote device;

receiving back an (n +1)th code component over the network and from said network device, the (n+1)th code component responsive to the nth code component; and

updating a display of the editable document to reflect the network device response.

55. (Previously Presented) The apparatus of claim 54 wherein the nth code component represents at least a request for a list of commands that correlate to an indicated position within the editable document and wherein the $(n+1)$th code component represents at least said list of commands.

56. (Previously Presented) The apparatus of claim 54 wherein the nth code component represents at least a request for a syntax check of the modified editable document and wherein the $(n+1)$th code component represents at least an indication of a syntax error in the modified text.